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| | Application No. | Applicant(s) |
|--|---|---------------|
| Notice of Allowability | 10/721,769 | BIRANG ET AL. |
| | Examiner | Art Unit |
| | David Nhu | 2818 |
| The MAILING DATE of this communication appears on the cover sheet with the correspondence address All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS. This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308. 1. This communication is responsive to 9/12/05. | | |
| 2. X The allowed claim(s) is/are 1-5,7-18,22,24 and 35-41. | | |
| 3. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some* c) None of the: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 60/428,569. 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)). * Certified copies not received: Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. THIS THREE-MONTH PERIOD IS NOT EXTENDABLE. | | |
| 4. A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient. 5. CORRECTED DRAWINGS (as "replacement sheets") must be submitted. | | |
| (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached | | |
| 1) hereto or 2) to Paper No./Mail Date | | |
| (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d). | | |
| 6. DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL. | | |
| | | |
| Attachment(s) 1. ☐ Notice of References Cited (PTO-892) 2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948) 3. ☑ Information Disclosure Statements (PTO-1449 or PTO/SB/O Paper No./Mail Date 01 4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material | 6. Interview Summary Paper No./Mail Da 08), 7. Examiner's Amend | ate |
| | X | ENRR |

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REASONS FOR ALLOWANCE

1. Claims 1-5, 7-18, 22, 24, 35-41 are allowed.

- 2. The following is an examiner's statement of reasons for allowance: None of the references of record teaches or suggests as cited in claims 1, 12, 22, 24, 35: measuring at a metrology a dielectric thickness in an array for each of a plurality of array of a first wafer of a plurality of wafers; determining at least one polishing parameter from the measured dielectric thickness so that a uniformity of metal feature thickness is increased with subsequent polishing, the determining being based on a model in which a thickness of a metal feature in an array is proportional to a dielectric thickness in the array; and polishing a subsequent wafer from the plurality of wafers using the polishing parameter (as cited in claims 1, 22, 35); calculating at least one polishing parameter using the measurement of the metal feature thickness of the first wafer that approximates an optional solution under a plurality of constrains with reference to which a predicted metal feature thickness uniformity is maximized in a subsequent wafer from the plurality of wafers; and polishing the subsequent wafer from the plurality of wafers using the at least one polishing parameter (as cited in claims 12, 24).
- 3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Stanke et al (6,829,054 B2): Integrated Surface Metrology.

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5. Any inquiry concerning this communication on earlier communications from the examiner should be directed to David Nhu, (571)272-1792. The examiner can normally be reached on Monday-Friday from 7:30 AM to 5:00 PM.

The examiner's supervisor, David Nelms can be reached on (571)272-1787.

The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956

David Nhu

September 23, 2005

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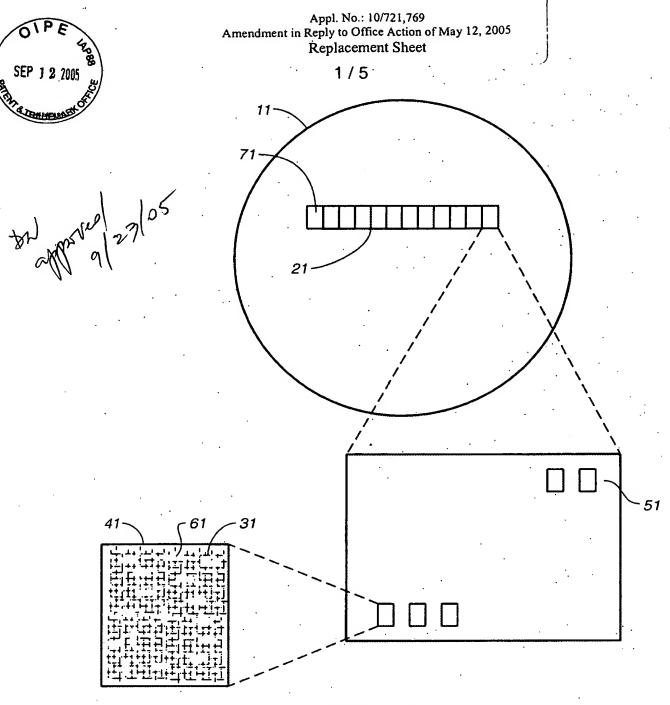
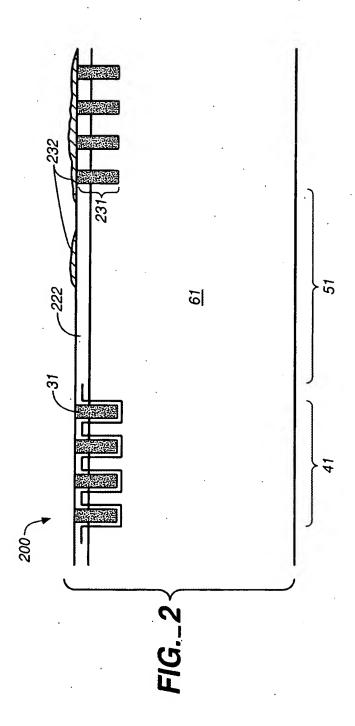


FIG._1



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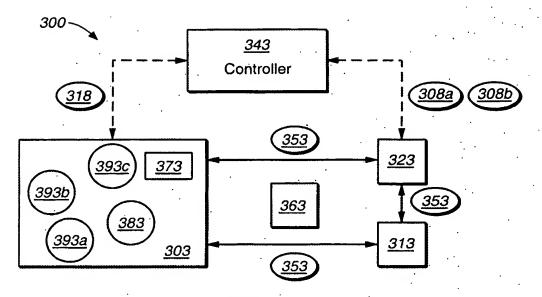


FIG._3

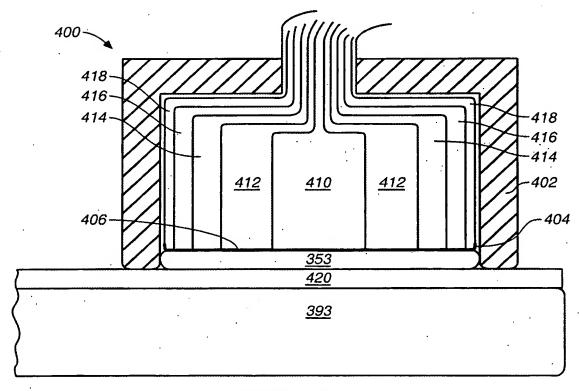


FIG._4

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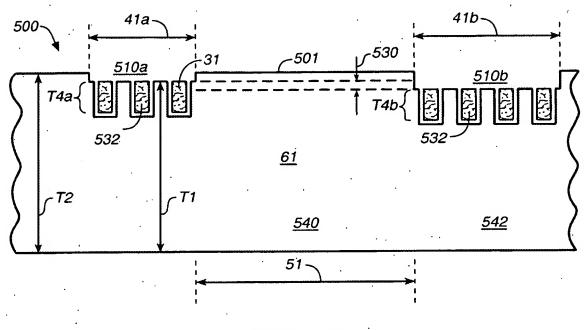


FIG._5a

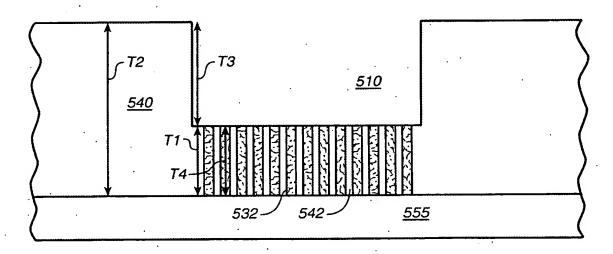


FIG._5b

Appl. No.: 10/721,769
Amendment in Reply to Office Action of May 12, 2005
Replacement Sheet

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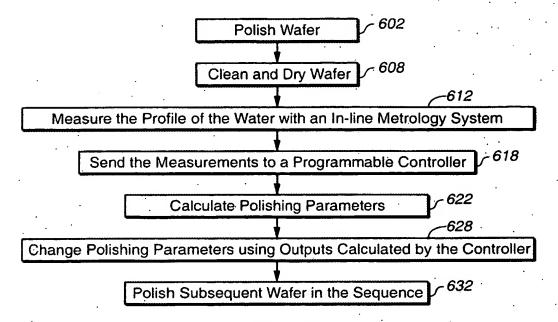


FIG._6

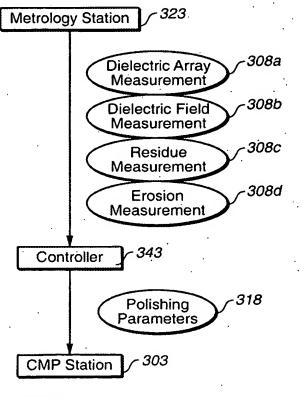


FIG._7